

# Arsenii Ashukha

PhD Candidate at Bayesian Methods Research Group

Student Researcher Samsung AI Center Moscow

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## EDUCATION

- PhD Candidate, **National Research University Higher School of Economics**, 2017 - Now  
Topic: Probabilistic deep learning, Advisor: Dmitry Vetrov
- MSc in Applied Math and Computer Science, **Moscow Institute of Physics and Technology**, 2017 (with distinction)  
Thesis: *Sparsification of DNNs probabilistic framework*, Advisors: Dmitry Vetrov and Alexey Dral
- BSc in Applied Math and Computer Science, **Bauman Moscow State Technical University**, 2015  
Thesis: *Bigram anchor words topic modeling*, Advisor: Natalia Loukachevitch

## PROFESSIONAL EXPERIENCE

- Student Researcher at **Samsung AI Center** (2018 - Now):  
Research on probabilistic deep learning, ensembles of DNNs, uncertainty estimation.
- Student Researcher at **Yandex Research & University of Amsterdam** (2017 - 2018):  
Research on Bayesian deep learning for a group-level sparsification and uncertainty estimation.
- Research Intern at **Lab of Deep Learning and Bayesian Methods HSE** (2016 - 2017):  
Research on Bayesian deep learning for sparsification and incremental learning.

My responsibility included: find research direction, schedule and execute research agenda, e.g., design, implement, and evaluate of models and algorithms, report and present research findings.

## PUBLICATIONS

- **Pitfalls of In-Domain Uncertainty Estimation and Ensembling in Deep Learning**  
International Conference on Learning Representations (ICLR 2020)  
[Arsenii Ashukha\\*](#), Alexander Lyzhov\*, Dmitry Molchanov\*, Dmitry Vetrov.
- **Variance Networks: When Expectation Does Not Meet Your Expectations**  
International Conference on Learning Representations (ICLR 2019)  
Kirill Neklyudov\*, Dmitry Molchanov\*, [Arsenii Ashukha\\*](#), Dmitry Vetrov.
- **The Deep Weight Prior**  
International Conference on Learning Representations (ICLR 2019)  
Andrei Atanov\*, [Arsenii Ashukha\\*](#), Kirill Struminsky, Dmitry Vetrov, Max Welling.
- **Uncertainty Estimation via Stochastic Batch Normalization**  
Workshop Track International Conference on Learning Representations (ICLR 2018)  
Andrei Atanov, [Arsenii Ashukha](#), Dmitry Molchanov, Kirill Neklyudov, Dmitry Vetrov
- **Variational Dropout Sparsifies Deep Neural Networks**  
International Conference on Machine Learning (ICML 2017)  
Dmitry Molchanov\*, [Arsenii Ashukha\\*](#), Dmitry Vetrov

Full list: [scholar.google.com/citations?user=IU-kuP8AAAAJ](https://scholar.google.com/citations?user=IU-kuP8AAAAJ). \*equal contribution.

## MISCELLANEOUS

- **Reviewing:**
  - Conferences: ICML (2019, 2020), NeurIPS 2019 (top-50% highest-scoring reviewers), ICLR 2020
  - Workshops: INNf (since 2019, [invertibleworkshop.github.io](https://invertibleworkshop.github.io)), BDL (since 2017, [bayesiandeeplearning.org](https://bayesiandeeplearning.org))
- **Thesis supervision:**
  - Alexander Lyzhov (M.Sc., ongoing)
  - Andrei Atanov (B.Sc., 2018, M.Sc., ongoing)
- **Teaching:**
  - Machine Learning at MIPT: TA (2016), Lecturer (2017, 2018)
  - Supervisor of scientific seminars on machine learning at HSE and Yandex (since 2017)
  - TA at **DeepBayes** Summer School on Bayesian Deep Learning (since 2017), <http://deepbayes.ru>
- **Open-source contributions:** See <https://github.com/senya-ashukha>.